



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/658,310

09/09/2003

Ed H. Frank

14177US02

2145

23446 7590 07/28/2010  
MCANDREWS HELD & MALLOY, LTD  
500 WEST MADISON STREET  
SUITE 3400  
CHICAGO, IL 60661

EXAMINER

JOHNSON, CARLTON

ART UNIT

PAPER NUMBER

2436

MAIL DATE

DELIVERY MODE

07/28/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/658,310	<b>Applicant(s)</b> FRANK ET AL.	
	<b>Examiner</b> CARLTON V. JOHNSON	<b>Art Unit</b> 2436	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This action is in response to application amendments filed on 5-18-2010.
2. Claims **1 - 42** are pending. Claims **1, 15, 29** are independent. This application was filed on 9-9-2003.

### *Response to Arguments*

3. Applicant's arguments have been fully considered and they are not persuasive.

- 3.1 Applicant argues that the referenced prior art does not disclose, *"from an access point perspective*.

There does not appear to be disclosure for Applicant's assertion (*Remarks Page 12, Lines 12-15*) that each claim limitation for Claim 1 is from an access point's perspective. Only the first claim limitation mentions an access point as a claim limitation. There does not appear to disclosure for this assertion within the specification. The language of the claim limitation has to be interpreted as stated. The access point is only disclosed in claim limitation 1 and not in the other two claim limitations.

- 3.2 Applicant argues that the referenced prior art does not disclose, *Claim 1 limitations*.

Bridgelall discloses the claim limitations for Claim 1 as follows:

Channel 336 (first PHY channel)

- receiving on a first PHY channel of an access point, a request for initiation of

Art Unit: 2436

a communication session from an originating access device; (see Bridgelall col 6, lines 7-9: enables user to conduct communications via the network via an access point; col. 7, lines 33-36: mobile unit (wireless device) posts a request to network via channel 336)

Channel 338 (second PHY channel)

- authenticating said communication session by authenticating said access using a second PHY channel; (see Bridgelall col 6, lines 7-9: enables user to conduct communications via the network via an access point; col. 7, lines 39 - 66: connection management service request via dedicated channel 338 or 340; authentication center provides authentication request to mobile over dedicated channel; mobile initiates authentication response over dedicated channel; response executes a cellular authentication and voice encryption algorithm; algorithm produces a registration authentication result which is provide to service provider)

Channel 342 (first PHY channel)

- hosting said communication session over a third PHY channel, said third PHY channel established between said access point and said originating access device. (see Bridgelall col 6, lines 7-9: enables user to conduct communications via the network via an access point; col. 8, lines 4-9: network assigns traffic channel for transmission of user data; assignment command from network and assignment complete message from mobile; communication on new channel 342)

Three different PHY channels are utilized to perform the three separate steps of Claim 1. In other disclosures, Bridgelall discloses that an authentication process is between the mobile and access point. (see Bridgelall col 9, lines 17-23: authentication process between mobile unit and access point)

3.3 Applicant argues *Bridgelall discloses only wireless communications.*

Bridgelall discloses wireless and wired communications. (see Bridgelall col 3, lines 15-18: connections can be o any standard wired or wireless configuration; col 5, lines 23-34: WLAN implemented as an extension to wired local network; access point connects to wired network; buffers and transmits between wireless LAN and wired LAN)

3.4 Applicant argues *all channels are attached to radio or mobile device.*

Each channel has two endpoints. The mobile unit is one endpoint and the access point (which facilitates communications to other nodes in the network) is the other endpoint. There is no disclosure that the other endpoint has to be the access point since the access point is only mentioned in the first claim limitation for Claim 1.

3.5 Applicant argues *dependent claims 6 - 9, 12 - 14, 20 - 23, 26 - 28, 40 - 42; dependent claims 10, 24.*

Arguments against dependent claims are answered by responses to independent claims.

3.6 Applicant argues *independent claims 15, 29.*

Independent claims 15 and 29 have similar limitations as independent claim 1.

Responses to arguments for independent claim 1 answer arguments against independent claims 15 and 29.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims **1, 6 - 9, 15, 20 - 23, 29, 34 - 37** are rejected under 35 U.S.C. 102(e) as being anticipated by **Bridgelall** (US Patent No. **7,039,027**)

**With Regards to Claims 1, 15, 29**, Bridgelall discloses a method, machine-readable storage having stored upon a computer program having at least one code section, system for multiple encryption in a multi-band multi-protocol hybrid wired/wireless network, the method comprising:

- a) receiving on a first PHY channel of an access point, a request for initiation of a communication session from an originating access device; (see Bridgelall col 6, lines 7-9: enables user to conduct communications via the network via an access point; col. 7, lines 33-36: mobile unit (wireless device) posts a request to network

Art Unit: 2436

via channel 336)

- b) authenticating said communication session by authenticating said access using a second PHY channel; (see Bridgelall col 6, lines 7-9: enables user to conduct communications via the network via an access point; col. 7, lines 39 - 66: connection management service request via dedicated channel 338 or 340; authentication center provides authentication request to mobile over dedicated channel; mobile initiates authentication response over dedicated channel; response executes a cellular authentication and voice encryption algorithm; algorithm produces a registration authentication result which is provide to service provider) and
- c) hosting said communication session over a third PHY channel , said third PHY channel established between said access point and said originating access device. (see Bridgelall col 6, lines 7-9: enables user to conduct communications via the network via an access point; col. 8, lines 4-9: network assigns traffic channel for transmission of user data; assignment command from network and assignment complete message from mobile; communication on new channel 342)

**With Regards to Claims 6, 20, 34,** Bridgelall discloses the method, machine-readable storage having stored upon a computer program having at least one code section, system according to claims 1, 15, 29, comprising receiving an identification of said originating access device by said access point. (see Bridgelall col. 7, line 61 - col. 8, line

Art Unit: 2436

2: message indicates type of service, user number, and identification of the mobile (wireless device))

**With Regards to Claims 7, 21, 35**, Bridgelall discloses the method, machine-readable storage having stored upon a computer program having one code section, system according to claims 6, 20, 34, wherein said identity of said originating access device is one or more of a WEP key, a MAC address, and/or an IP address. (see Bridgelall col. 12, lines 29-38: communication with MAC layer; devices connected to the physical layer are under the direction of a MAC management routine (MAC address); MAC layer implies a MAC address; col 12, lines 42-46: internet protocol layer, data delivery using TCP (IP address))

**With Regards to Claims 8, 22, 36**, Bridgelall discloses the method, machine-readable storage having stored upon a computer program having at least one code section, system according to claims 1, 15, 29, comprising acknowledging said received request on said first PHY channel. (see Bridgelall col. 7, lines 36-39: network provides a channel assignment via channel 334 which provides parameters for access to dedicated channel for call setup (acknowledgement))

**With Regards to Claims 9, 23, 37**, Bridgelall discloses the method, machine-readable storage having stored upon a computer program having at least one code section, system according to claims 1, 15, comprising determining a type of traffic generated by said originating access device on said first PHY channel. (see Bridgelall col. 7, line 67 -



Art Unit: 2436

col 8, lines 1: call setup indicates the type of service required (type of traffic))

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims **2 - 5, 10, 11, 16 - 19, 24, 25, 30 - 33, 38, 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bridgelall** in view of **He et al.** (US Patent No. **6,088,451**).

**With Regards to Claims 2, 16, 30**, Bridgelall discloses the method, machine-readable storage having stored upon a computer program having at least one code section according to claims 1, 15 with at least one encryption/decryption key for use during said communication session. (see Bridgelall col. 9, lines 31-42: mobile station (wireless device) has received a key through secure channel; mobile station provides an authentication response to access point; authentication status transmitted to mobile station (wireless device))

Bridgelall does not specifically disclose generating encryption/decryption key.

However, He discloses wherein further comprising generating. (see He col. 18, lines 2-5; col. 19, lines 8-11; col. 20, lines 57-61: generation encryption/decryption key)

Art Unit: 2436

It would have been obvious to one of ordinary skill in the art to modify Bridgelall for generation encryption/decryption key as taught by He. One of ordinary skill in the art would have been motivated to employ the teachings of He for network-wide centralized user administration and authentication, credential management and network element access. (see He col.1, lines 59-63)

**With Regards to Claims 3, 17, 31** Bridgelall discloses the method, machine-readable storage having stored upon a computer program having at least one code section, system according to claims 2, 17, 31, wherein said authenticating comprises requesting authentication information from an authentication server. (see Bridgelall col 6, lines 7-9: enables user to conduct communications via the network via an access point; col. 7, lines 39 - 66: connection management service request via dedicated channel 338 or 340; authentication center provides authentication request to mobile over dedicated channel; mobile initiates authentication response over dedicated channel; response executes a cellular authentication and voice encryption algorithm; algorithm produces a registration authentication result which is provide to service provider; (authentication center)

**With Regards to Claims 4, 18, 32**, Bridgelall discloses the method, machine-readable storage having stored upon a computer program having at least one code section, system according to claims 3, 17, 31, wherein said authenticating comprises delivering at least a portion of said authentication information received from said authentication

Art Unit: 2436

server to said originating access device via said second PHY channel. (see Bridgelall col 6, lines 7-9: enables user to conduct communications via the network via an access point; col. 7, lines 39 - 66: connection management service request via dedicated channel 338 or 340; authentication center provides authentication request to mobile over dedicated channel; mobile initiates authentication response over dedicated channel; response executes a cellular authentication and voice encryption algorithm; algorithm produces a registration authentication result which is provide to service provider; dedicated channel is second PHY channel)

**With Regards to Claims 5, 19, 33**, Bridgelall discloses the method, machine-readable storage having stored upon a computer program having at least one code section, system according to claims 4, 18, 32, wherein comprising delivering said at least one encryption/decryption key to said originating access device via one of said first PHY channel or said second PHY channel. (see Bridgelall col. 9, lines 31-42: mobile station (wireless device) has received a key through secure channel; mobile station provides an authentication response to access point; authentication status transmitted to mobile station (wireless device))

**With Regards to Claims 10, 24, 38**, Bridgelall discloses the method, machine-readable storage having stored upon a computer program having at least one code section, system according to claims 9, 23, 37, further comprising at least one key dependent on said determined traffic type. (see Bridgelall col. 9, lines 31-42: mobile station (wireless

Art Unit: 2436

device) has received a key through secure channel; mobile station provides an authentication response to access point; authentication status transmitted to mobile station (wireless device))

Bridgelall does not specifically disclose generating encryption/decryption key.

However, He discloses wherein comprising generating at least one encryption/decryption key. (see He col. 18, lines 2-5; col. 19, lines 8-11; col. 20, lines 57-61: generation encryption/decryption key)

Motivation for He to disclose generating an encryption/decryption key is as stated in Claim 2 above.

**With Regards to Claims 11, 25, 39**, Bridgelall discloses the method, machine-readable storage having stored upon a computer program having at least one code section, system according to claims 10, 24, 38, wherein comprising distributing said at least one encryption/decryption key via at one or both of said second PHY channel and/or said third PHY channel. (see Bridgelall col. 9, lines 31-42: mobile station (wireless device) has received a key through secure channel; mobile station provides an authentication response to access point; authentication status transmitted to mobile station (wireless device))

He discloses generating an encryption/decryption key is as stated in Claim 2 above.

8. Claims **12 - 14, 26 - 28, 40 - 42** are rejected under 35 U.S.C. 103 (a) as being

Art Unit: 2436

unpatentable over **Bridgelall** in view of **Sheth et al.** (US Patent No. **7,325,058**).

**With Regards to Claims 12, 26, 40**, Bridgelall discloses the method, machine-readable storage having stored upon a computer program having at least one code section according to claims 1, 15, 29, further comprising establishing at least one channel between said originating access device and a terminating access device. (see Bridgelall col 6, lines 7-9: enables user to conduct communications via the network via an access point; col. 7, lines 33-36: mobile unit (wireless device) posts a request to network via channel 336)

Bridgelall does not specifically disclose a virtual channel.

However, Sheth discloses establishing a virtual channel. (see Sheth col. 6, lines 62-67: virtual circuit or channel is a logical circuit for reliable communications between two network devices; virtual circuit (channel) identified by Virtual Path Identifier; col. 7, lines 19-31: limiting access to networks associated with a virtual circuit (channel); tunnel ID determined based upon domain name and virtual circuit (channel) identifier))

It would have been obvious to one of ordinary skill in the art to modify Bridgelall tfor a virtual channel as taught by Sheth. One of ordinary skill in the art would have been motivated to employ the teachings of Sheth for more secure control over which domains a particular subscriber may connect to using the widely used PPP protocol to combat intrusion such as denial of service attacks. (see Sheth col. 4, lines 24-26)

**With Regards to Claims 13, 27, 41**, Bridgelall discloses the method, machine-readable

Art Unit: 2436

storage having stored upon a computer program having at least one code section, system according to claims 12, 26, 40, comprises transferring information between said originating access device and said terminating access device. (see Bridgelall col 6, lines 7-9: enables user to conduct communications via the network via an access point; col. 7, lines 39 - 66: connection management service request via dedicated channel 338 or 340; authentication center provides authentication request to mobile over dedicated channel; mobile initiates authentication response over dedicated channel; response executes a cellular authentication and voice encryption algorithm; algorithm produces a registration authentication result which is provide to service provider)

Bridgelall does not specifically disclose tunneling

However, Sheth discloses tunneling information between originating access device and terminating access device. (see Sheth col. 6, lines 62-67: virtual circuit or channel is a logical circuit for reliable communications between two network devices; virtual circuit (channel) identified by Virtual Path Identifier; col. 7, lines 19-31: limiting access to networks associated with a virtual circuit (channel); tunnel ID determined based upon domain name and virtual circuit (channel) identifier))

Motivation for Sheth to disclose tunneling is as stated in Claim 12 above.

**With Regards to Claims 14, 28, 42,** Bridgelall discloses the method, machine-readable storage having stored upon a computer program having at least one code section, system according to claims 12, 26, 40, comprising establishing at least a portion of said at least one channel over at least a portion of one of said first PHY channel, said second PHY channel or said third PHY channel. (see Bridgelall col 6, lines 7-9: enables

user to conduct communications via the network via an access point; col. 7, lines 33-36:  
mobile unit (wireless device) posts a request to network via channel 336)

Sheth discloses a virtual channel as stated in Claim 12 above.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlton V. Johnson whose telephone number is 571-270-1032. The examiner can normally be reached on Monday thru Friday , 8:00 - 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Moazzami can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-

Art Unit: 2436

273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David García Cervetti/  
Primary Examiner, Art Unit 2436

Carlton V. Johnson  
Examiner  
Art Unit 2436

CVJ  
July 19, 2010